

## Claims:

1. A method for preparing oxytitanium phthalocyanine as a charge generating material, comprising the steps of:
- 5        mixing 30~100wt% sulfuric acid and an oxytitanium phthalocyanine crude in a mixing ratio between 100:1 and 1:1;
- homogeneously grinding the mixture in a wet grinder filled with zirconia or glass beads as grinding media at -20°C~60°C for 0.1~24 hours; and
- removing the grinding media from the ground mixture using a solvent.
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2. The method according to claim 1, wherein the oxytitanium phthalocyanine is obtained by reacting 1,2-dicyanobenzene or 1,3-diiminoisoindoline as a main material with titanium tetrachloride or tetraalkoxy titanium as a titanium source in N-methylpyrrolidone, 1-chloronaphthalene or quinoline as a solvent at 160~200°C
- 15        for 6~12 hours, and purifying the obtained reaction product.
3. The method according to claim 1, wherein the sulfuric acid has a concentration of 30~100wt%
- 20        4. The method according to claim 1, wherein the mixing and grinding is carried out at a temperature of -20°C~60°C.
5. The method according to claim 1, wherein the mixing and grinding is carried out for 0.1~24 hours.
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6. The method according to claim 1, wherein the wet grinder is an agitation-type wet grinder selected from attritors, sand mills and pearl mills; a diffuser selected from red devils; a ball mill; or vibration mill.

5           7. The method according to claim 1, wherein the grinding media are removed by adding the solvent to the ground mixture in a ratio of 1:4 to form a slurry, filtering the slurry, washing with the solvent, and drying at 40~80°C for 3~20 hours.

10           8. The method according to claim 1 or 7, wherein the solvent is selected from water; aliphatic alcohols, including methanol and ethanol; ketones, including acetone, methyl ethyl ketone and tetrahydrofuran; and mixtures thereof:

15           9. An oxytitanium phthalocyanine charge generating material prepared by the method according to claim 1 wherein the charge generating material shows broad X-ray diffraction peaks at Bragg angles of  $6.8 \pm 0.2^\circ$  to  $10.0 \pm 0.2^\circ$ , the highest peak among the peaks at a Bragg angle of  $8.8 \pm 0.2^\circ$ , and X-ray diffraction characteristic peaks at Bragg angles of  $14.2 \pm 0.2^\circ$ ,  $24.0 \pm 0.2^\circ$  and  $27.2 \pm 0.2^\circ$ ,

20           10. An oxytitanium phthalocyanine charge generating material prepared by the method according to claim 1 wherein the charge generating material shows X-ray diffraction peaks at Bragg angles of  $7.2 \pm 0.2^\circ$ ,  $9.2 \pm 0.2^\circ$ ,  $10.0 \pm 0.2^\circ$ ,  $11.3 \pm 0.2^\circ$ ,  $13.7 \pm 0.2^\circ$ ,  $17.8 \pm 0.2^\circ$ ,  $18.5 \pm 0.2^\circ$ ,  $23.0 \pm 0.2^\circ$ ,  $24.8 \pm 0.2^\circ$ ,  $27.2 \pm 0.2^\circ$  and  $28.8 \pm 0.2^\circ$ .

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11. An oxytitanium phthalocyanine charge generating material prepared by the method according to claim 1 wherein the charge generating material shows X-ray diffraction peaks at Bragg angles of  $7.5 \pm 0.2^\circ$ ,  $11.4 \pm 0.2^\circ$ ,  $13.7 \pm 0.2^\circ$ ,  $14.8 \pm 0.2^\circ$ ,  $18.0 \pm 0.2^\circ$ ,  $18.8 \pm 0.2^\circ$ ,  $23.0 \pm 0.2^\circ$ ,  $25.1 \pm 0.2^\circ$ ,  $27.2 \pm 0.2^\circ$  and  $28.8 \pm 0.2^\circ$ .

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12. The oxytitanium phthalocyanine charge generating material according to any one of claims 9 to 11, wherein the charge generating material shows the strongest X-ray diffraction peak at a Bragg angle of  $27.2 \pm 0.2^\circ$ .

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13. A photoconductor produced using the oxytitanium phthalocyanine charge generating material according to any one of claims 9 to 11.